

WHAT IS CLAIMED IS:

1. A demodulation apparatus for mobile communication having capability of cyclically selecting signals that meet a predetermined condition out of signals incoming via different paths, combining the signals, and outputting the combined signals, comprising:
the apparatus comprises threshold setting means; and
signal selecting means for comparing an incoming signal with a threshold set by said threshold setting means and for
10 selecting said compared signal according to said comparison result even if said signal does not meet said predetermined condition.
2. A demodulation apparatus for mobile communication according to claim 1, wherein said threshold setting means sets the threshold
15 based on correlation value information for signals selected in the previous cycle.
3. A demodulation apparatus for mobile communication according to claim 1, wherein said threshold setting means sets the threshold based on correlation value information for signals selected in
20 the current cycle.
4. A demodulation apparatus for mobile communication according to claim 1, wherein said signal selecting means selects signals that are signals of path locations different from path locations

of the signals selected in the previous cycle and that are equal to or above the threshold.

5. A demodulation apparatus for mobile communication according to claim 1, wherein said threshold setting means sets the threshold based on the maximum peak value of the signals selected in the previous cycle.

6. A demodulation apparatus for mobile communication according to claim 1, wherein said threshold setting means sets the threshold as a fixed value.

10 7. A demodulation apparatus for mobile communication according to claim 1, wherein said threshold setting means sets the threshold based on the maximum peak value obtained by calculation of a delay profile.

15 8. A demodulation apparatus for mobile communication according to claim 1, wherein said threshold setting means sets the threshold based on an average of values other than a detected peak value by calculation of a delay profile.

20 9. A demodulation method for mobile communication providing capability of cyclically selecting signals that meet a predetermined condition out of signals incoming via different paths, combining the signals, and outputting the combined signals, comprising:

a first step of setting a threshold; and

a second step of comparing an incoming signal with a threshold set by said first step and selecting said compared signal according to said comparison result even if said signal does not meet said predetermined condition.

- 5 10. A demodulation method for mobile communication according to claim 9, wherein said first step comprises setting the threshold based on correlation value information for signals selected in the previous cycle.
- 10 11. A demodulation method for mobile communication according to claim 9, wherein said first step comprises setting the threshold based on correlation value information for signals selected in the current cycle.
- 15 12. A demodulation method for mobile communication according to claim 9, wherein said second step comprises selecting signals that are signals of path locations different from path locations of the signals selected in the previous cycle and that are equal to or above the threshold.
- 20 13. A demodulation method for mobile communication according to claim 9, wherein said first step comprises setting the threshold based on the maximum peak value of the signals selected in the previous cycle.

14. A demodulation method for mobile communication according to claim 9, wherein said first step comprises setting the threshold as a fixed value.

15. A demodulation method for mobile communication according to claim 9, wherein said first step comprises setting the threshold based on the maximum peak value obtained by calculation of a delay profile.

16. A demodulation method for mobile communication according to claim 9, wherein said first step comprises setting the threshold based on an average of values other than a detected peak value by calculation of a delay profile.

17. A recording medium on which a control program for a demodulation method for mobile communication is recorded, the demodulation method providing capability of cyclically selecting signals that meet a predetermined condition out of signals incoming via different paths, combining the signals, and outputting the combined signals, wherein

the control program is recorded on the recording medium and comprises a first step of setting a threshold, and a second step of comparing an incoming signal with a threshold set by said first step and selecting said compared signal according to said comparison result even if said signal does not meet said predetermined condition.

RECORDED IN U.S. PATENT AND TRADEMARK OFFICE

18. A recording medium according to claim 17, wherein said first step comprises setting the threshold based on correlation value information for signals selected in the previous cycle.

19. A recording medium according to claim 17, wherein said first 5 step comprises setting the threshold based on correlation value information for signals selected in the current cycle.

20. A recording medium according to claim 17, wherein said second step comprises selecting signals that are signals of path locations different from path locations of the signals selected 10 in the previous cycle and that are equal to or above the threshold.

21. A recording medium according to claim 17, wherein said first step comprises setting the threshold based on the maximum peak value of the signals selected in the previous cycle.

22. A recording medium according to claim 17, wherein said first 15 step comprises setting the threshold as a fixed value.

23. A recording medium according to claim 17, wherein said first step comprises setting the threshold based on the maximum peak value obtained by calculation of a delay profile.

24. A recording medium according to claim 17, wherein said first 20 step comprises setting the threshold based on an average of values other than a detected peak value by calculation of a delay profile.

25. A demodulation apparatus for mobile communication according to claim 1, wherein said predetermined condition is to detect the peak of said signals at a certain path location for more than once.

5

26. A demodulation apparatus for mobile communication according to claim 1, wherein said signal selecting means selects said compared signal if the level of said incoming signal is equal to or above said threshold.

10

27. A demodulation method for mobile communication according to claim 9, wherein said predetermined condition is to detect the peak of said signals at a certain path location for more than once.

15

28. A demodulation method for mobile communication according to claim 9, wherein said second step selects said compared signal if the level of said incoming signal is equal to or above said threshold.

20

29. A recording medium according to claim 17, wherein said predetermined condition is to detect the peak of said signals at a certain path location for more than once.

25 30. A recording medium according to claim 17, wherein said second step selects said compared signal if the level of said incoming signal is equal to or above said threshold.